

PHOTORESIST ASH PROCESS WITH REDUCED INTER-LEVEL DIELECTRIC (ILD) DAMAGE

ABSTRACT OF THE DISCLOSURE

Novel interconnect structures possessing an organosilicate dielectric material with unaltered physical and chemical properties post exposure to a specific resist ash chemistry for use in semiconductor devices are provided herein. The novel interconnect structure is capable of delivering improved device performance, functionality and reliability owing to the use of a chemically and physically “friendly” resist ash process. An *in situ* inert gas/H₂ process achieves minimal chemical and physical reactivity with the organosilicate sidewalls during ashing owing to its inherent make up.